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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,310	03/26/2004	Andrew Martin Mallinson	ESST-02701	8000
34051	7590	10/22/2004	EXAMINER	
STEVENS LAW GROUP P.O. BOX 1667 SAN JOSE, CA 95109			JEANGLAUDE, JEAN BRUNER	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,310	MALLINSON, ANDREW MARTIN	
	Examiner	Art Unit	
	Jean B Jeanglaude	2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 March 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 March 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 – 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Rivoir et al. (US Patent Number 5,703,588).

3. Regarding claim 1, Rivoir et al. discloses a segmented digital to analog converter (fig. 6) that comprises an input for receiving an input signal (fig. 6); a first segment (50, fig. 6) configured to receive and convert one set of digital bits of the input signal to an analog signal (fig. 6); a second segment (52, fig. 6) configured to receive and convert a second set of digital bits of the input signal to an analog signal (fig. 6), the second segment (52, fig. 6) having series of resistors (Rf0,...Rf2-1, fig. 6) configured to receive the second set of digital bits (fig. 6), a first current source (54, fig. 6) connected at one end of the series of resistors (52) and a second current source (55, fig. 6) connected at another end of the series of resistors and an output (V_{out}) for outputting an analog signal (fig. 6).

4. Regarding claim 2, Rivoir et al. discloses a segmented DAC (fig. 6) wherein the current is transmitted between the first and second current source in a manner that substantially removes error in the transmission of the second set of digital bits (fig. 6)[as noted in the abstract the bias current is adjusted such that the voltage drop across

the whole of the second resistor string is equal to the voltage drop across the whole of the second resistor string ... second resistor magnitudes to obtain optimum performance without concern for any adverse nonlinearity effects. In obtaining optimum performance without concern for any adverse nonlinearity effects error is removed in the circuit without disturbing the circuit].

5. Regarding claim 3, Rivoir et al. discloses a segmented DAC (fig. 6) wherein current is transmitted between the first and second current source in a manner that substantially removes in the transmission of the second set of digital bits without creating a disturbance in the circuit as a whole (fig. 6)[as noted in the abstract the bias current is adjusted such that the voltage drop across the whole of the second resistor string is equal to the voltage drop across the whole of the second resistor string ... second resistor magnitudes to obtain optimum performance without concern for any adverse nonlinearity effects. In obtaining optimum performance without concern for any adverse nonlinearity effects error is removed in the circuit without disturbing the circuit].

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
7. Ashe (US Patent Number 5,495,245) discloses a DAC with segmented resistor string.
8. Gross, Jr. et al. (US Patent Number 5,619,203) discloses a current source driven converter.

9. Gross, Jr. et al. (US Patent Number 5,731,775) discloses a subranging converter with plurality of resistor strings and transistor switches.
10. Beck (US Patent Number 6,225,929) discloses a DAC having switchable current sources and resistor string.
11. Bugeja et al. (US Patent Number 6,424,283) discloses a segmented high speed and high resolution DAC.
12. Nicholson et al. (US Patent Number 6,486,818) discloses a segmented resistor string DACs.
13. Leung (US Patent Number 6,433,717) discloses a DAC strings with cross coupling switches.
14. Guerrero Mercado (US Patent Number 6,525,573) discloses a signal processing architecture.
15. Deak (US Patent Number 6,617,989) discloses a resistor string DAC with current source LSBS.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2819

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean Bruner Jeanglaude
Primary Examiner
October 15, 2004